# Exhibit O (Part 1)

## IN THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF DELAWARE

APPLERA CORPORATION, MDS INC., and APPLIED BIOSYSTEMS/MDS SCIEX,	)	
Plaintiffs,	)	Civil Action No. 00-105
v.	)	(RRM)
MICROMASS UK LTD. and MICROMASS INC.,	) )	
Defendants.	) )	

## PLAINTIFFS' OPENING BRIEF IN SUPPORT OF THEIR MOTION FOR SUMMARY JUDGMENT ON DEFENDANTS' INEQUITABLE CONDUCT DEFENSE AND ANTITRUST COUNTERCLAIMS

Filed: October 22, 2001

Jack B. Blumenfeld (#1014) Julia Heaney (#3052)

MORRIS, NICHOLS, ARSHT & TUNNELL

1201 N. Market Street

P.O. Box 1347

Wilmington, DE 19899-1347

(302) 658-9200

Attorneys for Plaintiffs Applera Corporation, MDS Inc., and Applied Biosystems/MDS Sciex

#### Of Counsel:

Walter E. Hanley, Jr.
James Galbraith
Lewis V. Popovski
Jeffrey S. Ginsberg
Huiya Wu
KENYON & KENYON
One Broadway
New York, NY 10004
(212) 425-7200

### TABLE OF CONTENTS

INTRODUC	TION .	
NATURE AN	ND STA	GE OF THE PROCEEDING 2
SUMMARY	OF AR	GUMENT 3
STATEMEN	T OF F	'ACTS 6
	A.	The Invention of the '736 Patent
	В.	The Inventors' Understanding of the Relevant Art 8
	C.	The Original Prosecution of the '736 Patent 10
	D.	The Reexamination of the '736 Patent 10
	E.	Micromass's Inequitable Conduct and Fraud Allegations 14
ARGUMEN'	г	
I.	APPL	ICABLE LEGAL STANDARDS 16
	Α.	Summary Judgment
	В.	Inequitable Conduct
		1. Materiality
		2. Intent
	C.	Antitrust Counterclaims
П.	INDI' WITH	RE IS NO EVIDENCE THAT ANY ASSOCIATED VIDUAL WITHHELD ANY MATERIAL INFORMATION H INTENT TO DECEIVE THE PTO IN THE ORIGINAL SECUTION OF THE '736 PATENT

i

**TA** 222

	A.	The Inventors Did Not Cite Collision Cell References Such As The French Application And The Caldecourt Article Because They Did Not Consider Them Pertinent To Their Invention, And They Are Not Pertinent
	В.	The Inventors Did Not Cite Ion Trap References Because They Did Not Consider Them Pertinent to Their Invention, And They Are Not Pertinent
	C.	The Inventors Did Disclose The Pertinent Ion Guide References Of Which They Were Aware, Including The Ion Guide Section Of the TAGA 6000
	D.	Dr. Douglas Did Not Disclose All Experiments And All Ways Known to Him to Improve Ion Transmission Because They Were Not Part of The Invention
m.	INDI ABO PRO	RE IS NO EVIDENCE THAT ANY ASSOCIATED VIDUAL INTENDED TO DECEIVE THE PTO IN ARGUING UT THE CITED PRIOR ART IN THE ORIGINAL SECUTION OR THE REEXAMINATION OF THE '736 ENT
	A.	The Examiner Had the Cited Prior Art Before Him and Could Make His Own Judgments about What the Prior Art Taught
IV.	INDI WIT	RE IS NO EVIDENCE THAT ANY ASSOCIATED IVIDUAL WITHHELD ANY MATERIAL INFORMATION H INTENT TO DECEIVE THE PTO IN THE XAMINATION OF THE '736 PATENT
	Α.	The References Micromass Cites Are Not Prior Art and Do Not Undermine Any Argument Made in the Reexamination 36
		1. The Douglas and French Article Is Not Prior Art and Does Not Contradict Statements Made in the Reexamination about Ion Traps

ii

	2.	Operating an Ion Guide at High Pressure to Improve Transmission
	3.	The Thomson and Douglas Article Is Not Prior Art and Does Not Make the Collision Cell Prior Art
		Relevant
	4.	The '278 Patent to Dr. Douglas and the ICP Article Are Not Prior Art And Do Not Make Collision Cell Prior
		Art Pertinent
	5.	There Is No Evidence That the Associated Persons Were Aware of the Bruins Reference or That the Reference Discloses Anything More than the References That Were Cited
v.	MICROMA	ASS'S REMAINING ACCUSATIONS DO NOT EVEN
**	STATE A F	PRIMA FACIE DEFENSE OF INEQUITABLE
	CONDUCT	
VI.	MICROMA	ASS'S ANTITRUST COUNTERCLAIMS SHOULD BE
	DISMISSE	
		47

iii

#### TABLE OF AUTHORITIES

#### FEDERAL CASES

Akron Polymer Container Corp. v. Exxel Container, Inc., 148 F.3d 1380 (Fed. Cir. 1998)
Akzo N.V. v. U.S. Int'l Trade Comm'n, 808 F.2d 1471 (Fed. Cir. 1986)
Akzo v. E.I. Du Pont de Nemours, 810 F.2d 1148 (Fed. Cir. 1987)
Allen Organ Co. v. Kimball Int'l, Inc., 839 F.2d 1556 (Fed. Cir. 1988)
Anderson v. Liberty Lobby, Inc., 477 U.S. 242 (1986)
Argus Chem. Corp. v. Fibre Glass-Evercoat Co., 812 F.2d 1381 (Fed. Cir. 1987)
ATD Corp. v Lydall, Inc., 159 F.3d 534 (Fed. Cir. 1998)
Braun, Inc. v. Dynamics Corp. of America, 975 F.2d 815 (Fed. Cir. 1992)
Burlington Indus., Inc. v. Dayco Corp., 849 F.2d 1418 (Fed. Cir. 1988).
Celotex Corp. v. Catrett, 477 U.S. 317 (1986)
FMC Corp. v. Manitowoc Co., 835 F.2d 1411 (Fed. Cir. 1987)
Glaverbel Societe Anonyme v. Northlake Mktg. & Supply, Inc., 45 F.3d 1550 (Fed. Cir. 1995)
Halliburton Co. v. Schlumberger Tech. Corp., 925 F.2d 1435 (Fed. Cir. 1991)

iv

847 F.2d 801 (Fed. Cir. 1988)
LNP Eng'g Plastics, Inc. v. Miller Waste Mills, Inc., 2000 U.S. Dist. LEXIS 20888 (D. Del. Aug. 8, 2000)
Molins PLC v. Textron, Inc., 48 F.3d 1172 (Fed. Cir. 1995)
Monsanto Co. v. Mycogen Plant Science, Inc., 61 F. Supp. 2d 133 (D. Del. 1999)
Nobelpharma AB v. Implant Innovations, Inc., 141 F.3d 1059 (Fed. Cir. 1998)
Northern Telecom, Inc. v. Datapoint Corp., 908 F.2d 931 (Fed. Cir. 1990)
Paragon Podiatry Lab., Inc. v. KLM Lab., 984 F.2d 1182 (Fed. Cir. 1993)
Schreiber Foods, Inc. v. Beatrice Cheese, Inc., 92 F. Supp. 2d 857 (E.D. Wis. 2000).
FEDERAL REGULATIONS
37 C.F.R. § 1.510 (2001)
37 C.F.R. § 1.56 (2001)

ν

#### INTRODUCTION

Plaintiffs Applera Corporation, MDS Inc., and Applied Biosystems/MDS Sciex (collectively "AB/Sciex") hereby moves for summary judgment dismissing the inequitable conduct defense and related counterclaim for declaratory judgment of unenforceability asserted by defendants' Micromass UK Ltd. and Micromass Inc. (collectively "Micromass"). AB/Sciex also moves for summary judgment dismissing Micromass's antitrust counterclaims, because they are premised on the same allegations as the inequitable conduct defense.

AB/Sciex seeks judgment that as a matter of law: (1) neither the inventors nor their attorneys nor any other individual associated with the original prosecution or reexamination of U.S. Patent No. 4,963,736 ("the '736 patent") (App. Tab 1 at A1-23; App. Tab 2 at A24-25) engaged in inequitable conduct before the PTO; and (2) the '736 patent was not procured by fraud on the PTO.

<sup>&#</sup>x27;See First Amended Answer, Affirmative Defenses, and Counterclaim of Defendant Micromass, Inc. ("Micromass, Inc. Am. Answer"), Seventh and Eighth Affirmative Defenses and Count 1, D.I. 46 at 10, 15-16 (¶ 19-23); First Amended Answer, Affirmative Defenses and Counterclaim of Defendant Micromass UK Ltd. ("Micromass UK Am. Answer"), Seventh and Eighth Affirmative Defenses and Count I, D.I. 47 at 10, 15-16 (¶ 19-23).

<sup>&</sup>lt;sup>2</sup> See Micromass, Inc. Am. Answer, Counts II, III and IV, D.I 46 at 16-19 (¶¶ 24-43); Micromass UK Am. Answer, Counts II, III and IV, D.I. 47 at 16-19 (¶¶ 24-43).

<sup>&</sup>lt;sup>3</sup> See Micromass, Inc. Am. Answer, Counts II, III and IV, D.I. 46 at 16-17, 19 (¶¶ 27, 32, 40); Micromass UK Am. Answer, Counts II, III and IV, D.I. 47 at 16-17, 19 (¶¶ 27, 32, 40).

. .

#### NATURE AND STAGE OF THE PROCEEDING

On February 18, 2000, AB/Sciex filed this action against Micromass for infringing the '736 patent. On November 15, 2000, Micromass UK Ltd. and Micromass Inc. each filed a First Amended Answer, Affirmative Defenses, and Counterclaim (collectively "Amended Answers"), raising an affirmative defense of inequitable conduct, seeking a declaratory judgment that the '736 patent is unenforceable, and alleging three antitrust counterclaims: monopolization, attempted monopolization, and conspiracy to monopolize. Micromass, Inc. Am. Answer, D.I. 46 at 10, 15-19; Micromass UK Am. Answer, D.I. 47 at 10, 15-19.

During fact discovery, Micromass took the depositions of the named inventors of the '736 patent, Dr. Donald Douglas and Dr. John French, the attorney who handled the reexamination of the patent, Mr. Geoffrey Sutcliffe, as well as employees of AB/Sciex who were involved with the prosecution of the patent, Dr. William Davidson and Dr. Bruce Thomson. Fact discovery closed on September 7, 2001. A hearing on claim construction is set for December 13, 2001. The case is scheduled for a ten day jury trial beginning on January 28, 2001.

<sup>&</sup>lt;sup>4</sup> On July 10, 2000, Micromass Inc. filed an Answer, Affirmative Defenses, and Counterclaim, that asserted the same defenses and counterclaims. Micromass UK initially contested personal jurisdiction, but on October 6, 2000, filed its Answer that mirrored Micromass Inc.'s.

#### SUMMARY OF ARGUMENT

To prevail on its inequitable conduct defense, Micromass must establish by 1. clear and convincing evidence that an individual associated with the original prosecution or reexamination of the '736 patent (hereinafter, "an Associated Individual") withheld material information or misrepresented a material fact with intent to deceive the PTO. FMC Corp. v. Manitowoc Co., 835 F.2d 1411, 1415 (Fed. Cir. 1987). Micromass has leveled a plethora of accusations, twenty-nine in number, not a single one of which is supported by even a shred of evidence of intent to deceive the PTO.5 Defs.' Supp. Resp. to Interrog. No. 11 ¶ 1-29. (App. Tab 5 at A511-21.)

Micromass's accusations can be grouped into four categories:

Allegations of failure to disclose material information to the PTO in the (1) original prosecution of the '736 patent. Defs.' Supp. Resp. to Interrog. No. 11 ¶¶ 1, 8, 12-14, 20, 21, 23-29. (App. Tab 5 at A511, A514-16, A518-21.)

These allegations concern information known to at least one of the inventors at the time of the filing or prosecution of the '736 patent. There is no evidence that either of the inventors considered any of this information to be material to the examination of their patent application, and, indeed, none of it was material. Thus, there is no evidence to support any inference of an intent to deceive the PTO. See Monsanto Co. v. Mycogen

<sup>&</sup>lt;sup>5</sup> Micromass repeatedly accuses "Plaintiffs (or their representatives)" in its laundry list of inequitable conduct charges. There is no such thing as corporate inequitable conduct. Schreiber Foods, Inc. v. Beatrice Cheese, Inc., 92 F. Supp. 2d 857, 872, n.16 (E.D. Wis. 2000). The duty of candor and good faith is held by "[e]ach individual associated with the filing and prosecution of a patent application." 37 C.F.R. § 1.56(a) (2001) (emphasis added). Inequitable conduct is established by clear and convincing evidence that such an individual withheld material information or made a misrepresentation of a material fact with intent to deceive the PTO.

Plant Science, Inc., 61 F. Supp. 2d 133, 198 (D. Del. 1999) ("Because he did not appreciate the facts disclosed in the [reference] as material information, [applicant's] failure to disclose the information did not result from any intent to mislead the PTO").

Allegations that misleading arguments regarding the contents of prior art (2)references were made to the PTO during the original prosecution and reexamination of the '736 patent. Defs.' Supp. Resp. to Interrog. No. 11 ¶¶ 2-7, 9. (App. Tab 5 at A512-14.)

These allegations concern distinctions between the invention and the prior art made in the specification of the '736 patent or argued by the attorney and one inventor, Dr. French, in the reexamination. Regardless of the merits of these arguments, which were, in fact, sound, the Examiner could review the references and make his own judgments regarding them. See Akzo N.V. v. U.S. Int'l Trade Comm'n, 808 F.2d 1471, 1482 (Fed. Cir. 1986) (affirming finding of no inequitable conduct when a patent applicant made favorable distinctions between the disclosed prior art and the claimed invention because "the examiner was free to reach his own conclusion regarding [the claimed invention] based on the art in front of him").

Allegations of failure to disclose material information to the PTO in the (3) reexamination of the '736 patent. Defs.' Supp. Resp. to Interrog. No. 11 ¶¶ 10, 11, 14, 18-29. (App. Tab 5 at A514-21.)

These allegations concern information known to Dr. Douglas or Dr. French during the reexamination proceeding. Again, there is no evidence that either of them considered any of this information to be material to the examination of their patent application, and none of it was material.

(4) Miscellaneous allegations that do not state a prima facie defense of inequitable conduct. Defs.' Supp. Resp. to Interrog. No. 11 ¶¶ 5, 15-17. (App. Tab 5 at A513, A516.)

In these allegations, Micromass does not state that an Associated Individual withheld material information or made a misrepresentation of a material fact to the PTO. In fact these allegations are not directed to the interaction with the PTO at all. Micromass alleges, for example, that Dr. Douglas and/or Dr. French were not consulted with regard to representations made to the PTO in the reexamination, not that a particular representation was misleading or false. Defs.' Supp. Resp. to Interrog. No. 11 ¶ 15. (App. Tab 5 at A516.) These allegations, therefore, do not state a defense of inequitable conduct on their face.

The Federal Circuit has set a high standard for proof of inequitable conduct and has cautioned against the abuse of this defense: "[T]he habit of charging inequitable conduct in almost every major patent case has become an absolute plague. . . . A patent litigant should be made to feel, therefore, that an unsupported charge of 'inequitable conduct in the Patent Office' is a negative contribution to the rightful administration of justice." Burlington Indus., Inc. v. Dayco Corp., 849 F.2d 1418, 1422 (Fed. Cir. 1988), cited in Molins PLC v. Textron, Inc., 48 F.3d 1172, 1182 (Fed. Cir. 1995). Inequitable conduct is not established by proliferating unsupported and unsupportable allegations. Micromass has deposed, or has had the opportunity to depose, each of the inventors, as well as any other Associated Individual. The Court should grant summary judgment here because there is no evidence, much less clear and convincing evidence, that any Associated Individual withheld any material information or made any material

misrepresentation with intent to deceive the PTO.

Micromass's antitrust counterclaims rest upon the same unsupported 2. allegations as its inequitable conduct defense, and, therefore, should be dismissed as well.

#### STATEMENT OF FACTS

#### The Invention of the '736 Patent A.

The '736 patent relates to a quadrupole mass spectrometer and its method of operation. Id. at col. 1, ll. 6-11. (App. Tab 1 at A16.) A quadrupole mass spectrometer is a device that provides information about the identity of a sample compound, such as the molecular weight of a chemical compound or its chemical structure. Enke Decl. ¶¶ 3-4. (App. Tab 17 at A664-65.) A mass spectrometer creates charged particles (called "ions") from a sample compound, and then uses a combination of pressure and electric fields to analyze those ions. Id. A quadrupole mass spectrometer generally includes four sections: an ion source, an ion guide, a mass filter (or mass analyzer), and a detector. Id. The ion source typically operates at atmospheric pressure and generates ions from a sample compound. These ions travel through the ion guide section to the mass filter section, which operates at a very low pressure. The ion guide section serves as an interface to step down the pressure between the ion source and the mass filter. The mass filter section filters out the ions that are not of interest, so that the detector can detect the ions of interest. The ion guide is at the heart of the '736 patent.

The more efficiently ions are transferred through the ion guide, the more sensitive a mass spectrometer is. Sensitivity of a mass spectrometer is a key performance

parameter.

Prior to the invention of the '736 patent, it was believed that an ion guide should be operated at a low pressure, typically 10<sup>-4</sup> torr or less, to maximize the transmission of ions from the ion source to the mass filter. The belief at that time was that as pressure in the ion guide increases, ion transmission would decrease as it was more likely that inert gas molecules would collide with the ions and cause them to "scatter," rendering them undetectable. Thus, ion guides were operated at low pressures to maximize the number of ions transferred from the ion source to the mass filter and the detector.

Drs. Donald Douglas and John Barry French, the inventors of the '736 patent, however, discovered that increasing the pressure in the ion guide caused an increase of ion transmission, thereby increasing the sensitivity of the mass spectrometer. See '736 patent at col. 5, 11. 40-49. (App. Tab 1 at A18.) This increased sensitivity is obtained through the use of what the '736 patent calls "collisional focusing" - using collisions with the background gas molecules to dampen the energy of the ions and thus concentrating or "focusing" the ions into a dense beam along the centerline of a passageway defined by a set of rods. Id. at col. 6, 11. 62 - col. 7, 11. 9, 58-62. (App. Tab 1 at A18-19.) The highly concentrated beam allows more ions to be transmitted through the relatively small orifice (an "interchamber orifice") leading out of the ion guide into the mass filter than otherwise

<sup>&</sup>lt;sup>6</sup> The '736 patent references two papers that exemplify the use of low pressures in the ion guide sections of a mass spectrometer: (1) Smith et al., On-line Mass Spectrometeric Detection for Capillary Zone Electrophoresis, 59 Anal. Chem. 1230 (April 15, 1987) (showing ion guide pressures of 8 x 10<sup>-4</sup> torr); and (2) Smith et al., Capillary Zone Electrophoresis - Mass Spectrometry Using an Electrospray Ionization Interface, 60 Anal. Chem. 436 (March 1, 1988) (showing ion guide pressures of 10<sup>-5</sup> torr or less). Id. at col. 5, ll. 3-15. (App. Tab 1 at A18.)

might be possible. The ion guide of the invention maintains the kinetic energies of the ions entering the passageway defined by the rods be at a relatively low to avoid fragmenting the ions into their constituent parts. Id. at col. 12, 11. 30-49 (App. Tab 1 at A21.) This fragmentation phenomenon is also called "collisionally induced dissociation." The '736 patent teaches that such fragmentation causes losses of ion transmission and thereby should be avoided. Id. at col. 12, 11, 47-49. (App. Tab 1 at A21.) Dr. Douglas has so testified: "the 736 patent is about ion guides, where we attempt to minimize fragmentation." Douglas Tr. of 8/24/01, at 363 (App. Tab 10 at A581.)

#### The Inventors' Understanding of the Relevant Art B.

Drs. Douglas and French understood that the crux of their invention is an ion guide operating at a high pressure (such that the pressure in the ion guide times the length of the rods is greater than 2.25 x 10<sup>-2</sup> torr cm) and relatively low ion kinetic energy. See, e.g., French Tr. of 6/27/01, at 35-36. (App. Tab 6 at A527-28.) The inventors disclosed all prior art that they considered relevant to their invention:

> Q: Did you provide to counsel, in connection with the '763 [sic] patent, references that you considered to be material with regard to the grant of the application that matured into the '763 [sic] patent?

A: Yes.

French Tr. of 6/28/01, at 276. (App. Tab 7 at A533.)

Q: Okay. Did you provide to the U.S. Patent Office all references that you believed were relevant to your discovery and the '736 patent?

A: Yes.

Douglas Tr. of 8/24/01, at 526. (App. Tab 10 at A596.)

8

The inventors correctly believed that references relating to "ion traps," a type of mass spectrometer, and "collision cells," a part of a "tandem" mass spectrometer, were not relevant. An ion trap is a device that consists of a chamber that is capable of storing ions for a relatively long period of time before ejecting the ions out of the device. Enke Decl. ¶¶ 5-9. (App. Tab 17 at A65-67.) The mass filter section of a "tandem" mass spectrometer includes two mass filters separated by a "collision cell." Enke Decl. ¶¶ 8-9. (App. Tab 17 at A66-67.) The purpose of a collision cell is to fragment the ions that pass through the first mass filter into their constituent parts (called "daughter" or "product" ions). Id. The daughter ions provide more detail on the identity and quantity of the original ions (called "parent" or "precursor" ions). Id. Generally, a "collision gas" is introduced into the collision cells so that parent ions entering at high kinetic energies fragment when they collide with a molecule of the collision gas. Daughter ions are then transmitted to the second mass filter. Id.

Dr. Douglas testified that an ion trap is "a very different device" because, inter alia, "there's no ion storage in the '736 patent." See Douglas Tr. of 8/24/01, at 397-98. (App. Tab 10 at A588-89) Similarly, he testified that collision cells are different from the claimed invention of the '736 patent. See Douglas Tr. of 8/24/01, at 346 ("It's because this is a collision cell for fragmenting ions; whereas, our patent is an ion guide for transporting ions with minimum fragmentation. So, the purpose of the two devices is completely different."). (App. Tab 10 at A574.)

#### C. The Original Prosecution of the '736 Patent

On November 15, 1989, AB/Sciex filed a patent application for Drs. Douglas's and French's invention. Three references were disclosed in the text of the specification, each of which disclosed an ion guide: (1) U. S. Patent No. 4,328,420 ("the '420 patent"), of which Dr. French was the inventor; (2) Richard D. Smith, On-Line Mass Spectrometric Detection for Capillary Zone Electrophoresis, 59 Anal. Chem. 1230 (1987) ("First Smith reference"); and (3) Richard D. Smith, Capillary Zone Electrophoresis – Mass Spectrometry Using an Electrospray Ionization Interface, 60 Anal. Chem. 436 (1988) ("Second Smith reference") (collectively "the Smith references"). Id. at col. 4, ll. 51 - col. 5, ll. 5. (App. Tab 1 at A17-18.)

The Examiner correctly understood that the invention related to the ion guide section of a mass spectrometer. On May 8, 1990, in the First Office Action, the Examiner allowed all twenty-four claims as originally filed, stating that:

The prior art does not teach to operate an AC only quadrupole, used to guide ions to a mass analyzing quadrupole in a high vacuum chamber, at a pressure such that the product of the length of the AC quadrupole times the pressure in its chamber is greater than or equal to 2.25 x 10<sup>-2</sup> torr cm.

Notice of Allowability of 5/8/90 at 2 (emphasis added). (App. Tab 3 at A114.) The '736 patent issued on October 16, 1990.

#### D. The Reexamination of the '736 Patent

On September 30, 1997, AB/Sciex requested for reexamination of the '736 patent in light of the following references:

(1) French, European Patent Application Publication No. 0 023 826, February 11, 1981 ("French application");

10

Page 18 of 42

- Boinott et al., Optimization of Instrument Parameters for Collision (2) Activated Decomposition (CAD) Experiments for a Finnigan Triple Stage Quadrupole GC/MS/MS/DS, 1981 Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy, March 9-13, 1981, Abstract No. 782 ("Finnigan abstract");
- Boinott et al., Optimization of Instrument Parameters for Collision (3) Activated Decomposition (CAD) Experiments for a Finnigan Triple Stage Quadrupole (TSQTM) GC/MS/MS/DS, Finnigan Topic 8160 ("Finnigan paper");
- Caldecourt et al., An Atmospheric-Pressure Ionization Mass (4) Spectrometer/Mass Spectrometer, 49 International Journal of Mass Spectrometry and Ion Physics 223 (1983) ("Caldecourt article"); and
- Four other references that are directed to ion traps ("Ion Trap (5) references").7

Patent Owner's Req. for Reexamination at 4-5. (App. Tab 4 at A183-84.)

On November 20, 1997, the Examiner granted AB/Sciex's request for reexamination, stating that the French application, considered with the Finnigan abstract or the Finnigan paper, raised a substantial new question of patentability. Order Granting Req. for Reexamination at 2. (App. Tab 4 at A274.) The Examiner did not find that the Caldecourt article or the Ion Trap references raised a substantial new question of patentability.

The Examiner found that the French application raised a substantial new question of patentability based on a passage stating that the invention of that application - the use of "open structure" AC-only rods in a tandem mass spectrometer - could be used in an instrument with two quadrupoles wherein the first one was an AC-only ion guide. Order

<sup>&</sup>lt;sup>7</sup> The French application, the Finnigan abstract, the Finnigan paper, and the Caldecourt article had been cited by Micromass in correspondence with AB/Sciex concerning the '736 patent in early 1997.

Granting Req. for Reexamination at 2. (App. Tab 4 at A274.) The Examiner did *not* find that the description of the tandem quadrupole system, including the description of the collision cell, was, by itself, material. The Examiner stated:

At lines 4 through 17 on page 20, the French application teaches that instead of the three quadrupole system discussed in the rest of the application, it is possible to arrange only two quadrupoles in series. According to the application, the first quadrupole in such a system should have only AC applied to it so that it acts as an ion guide to direct ions produced outside the system to the second quadrupole, which has both AC and DC applied to it so that it acts as a mass spectrometer.

Order Granting Req. for Reexamination at 2 (emphasis added).8 (App. Tab 4 at A274.)

In the first Office Action dated February 3, 1998, the Examiner repeated his statement as to why, in his view, the French Application was pertinent. See Office Action of 2/3/98, at 2. (App. Tab 4 at A278.) On March 11, 1998, the Examiner, in an Interview Summary, again confirmed that he understood that the invention related to an AC-only ion guide and that the French application was pertinent to the extent that it disclosed an ion guide:

Applicant could remove the French [application] as a reference by establishing that the product of pressure and length of the AC only quadrupole described in the reference when that quadrupole was used as a collision cell between two mass analyzing quadrupoles to fragment ions

<sup>&</sup>lt;sup>8</sup> The Examiner then incorrectly assumed that the pressures in the range of 10<sup>-2</sup> to 10<sup>-4</sup> torr in a collision cell can be applied to the ion guide. The passage in the French application on which the Examiner relied points that the ion guide "is shown and described in the said co-pending application of J. B. French, the description and drawings of which are hereby incorporated by reference into this application." The "co-pending application" has the same specification as that of Dr. French's '420 patent, which had already been considered by the Examiner in the original prosecution. The pressure in the AC-only ion guide in the '420 patent (Figs. 13 and 14) was not stated to be 10<sup>-2</sup> to 10<sup>-4</sup> torr as in the collision cell as disclosed in the French application.

was not intended to be used when that quadrupole was used only as an ion guide and not to fragment the ions.

Id at 1. (App. Tab 4 at A281.)

In the Declaration of Dr. Barry J. French dated April 1, 1998, Dr. French responded to the Examiner's position in the Interview Summary, stating that "[t]he pressure and rod length in the AC-only quadrupole described in the French application on page 7 was not intended to be used when that quadrupole was used only as an ion guide and not to fragment the ions." French Decl. ¶ 9. (App. Tab 4 at A285.)

In an Office Action dated June 15, 1998, the Examiner found that all of the original twenty-four claims in the '736 patent were patentable because:

The declaration of Dr. French filed on June 3, 1998 establishes that the apparatus disclosed in the French application does not operate with a product of pressure and rod length greater than or equal to  $2.25 \times 10^{-2}$  torr cm in a chamber containing a rod set operated with only AC voltages applied.

Id. at 2-3. (App. Tab 4 at A330-31.) The Examiner essentially reiterated this finding in his statement of reasons for allowance in the Notice of Intent to Issue Reexamination Certificate dated January 12, 1999. Id. at 2. (App. Tab 4 at A362.)

<sup>&</sup>lt;sup>9</sup> Dr. French explained that "[p]ages 3, 7-8, and 20 of the French application refer to an invention in a co-pending application of J. B. French. This invention is described in U. S. Patent No. 4,328,420." French Decl. ¶ 10. (App. Tab 4 at A285.) Dr. French also pointed out that the pressures of 10<sup>-2</sup> to 10<sup>-4</sup> torr in the collision cell in the French application was gradient of pressures within the cell and not a range of selectable uniform pressures. French Decl. ¶ 6. (App. Tab 4 at A284.)

4 1 7 g

#### Micromass's Inequitable Conduct and Fraud Allegations E.

In their Amended Answers, Micromass asserted that the '736 patent is unenforceable for inequitable conduct because "one or more material prior art references of which [AB/Sciex was] aware were not cited to the USPTO." D.I. 46 at 12; D.I. 47 at 12. Micromass identified only one prior art reference - the French application Almost a year later, on September 7, 2001, Micromass, in a response to AB/Sciex's Interrogatory No. 11, listed an array of inequitable conduct allegations. Micromass's twenty-nine accusations essentially fall into the following four categories:

Allegations of failure to disclose material information to the PTO in the 1. original prosecution of the '736 patent, including:

> the French application, the Caldecourt article, the Ion Trap references, the parameters of the TAGA 6000 mass spectrometer, U.S. Patent No. 4,121,099 ("the '099 patent"), the Bruins mass spectrometer system, certain experiments performed by Dr. Douglas prior to the filing of the application for the '736 patent, and various methods for improving ion transmission, i.e., pump size, spacing between skimmer and orifice, location of skimmer tip, voltage offset between the "first rod set" and the "second rod set," voltage offset between the "first rod set" and the "interchamber orifice"

Defs.' Supp. Resp. to Interrog. No. 11 ¶¶ 1, 8, 12-14, 20, 21, 23-29. (App. Tab 5 at A511, A514-16, A518-21.)

Allegations that misleading arguments regarding the contents of prior art 2. references were made to the PTO during the original prosecution and reexamination of the '736 patent, including:

the Second Smith reference, the French application, the Finnigan abstract, the Finnigan paper, and the Ion Trap references.

Id. at ¶¶ 2-7, 9. (App. Tab 5 at A512-14.)

3. Allegations of failure to disclose material information to the PTO in the reexamination of the '736 patent, including:

Donald Douglas & John French, Collisional Focusing Effects in Radio Frequency Quadrupoles, 3 J. Am. Soc. Mass. Spectrom. 398 (1992) ("the Douglas and French article") the TAGA 6000 mass spectrometer, U.S. Patent No. 5,248,875 ("the '875 patent"); Bruce Thomson & Donald Douglas, Improved Collisionally Activated Dissociation Efficiency and Mass Resolution on a Triple Quadrupole Mass Spectrometer System, 67 Analytical Chemistry 1696 (1995) ("the Thomson and Douglas article"), U.S. Patent No. 5,179,278 ("the '278 patent"), Interface Studies in the ICP-Mass Spectrometer ("the ICP article"); unidentified references "disclosing that collisions between ions and gas molecules at high pressures decrease the kinetic energies of said ions" ("Unnamed Collision Cell prior art"), the Bruins mass spectrometer system, references relating to ion traps, certain experiments performed by Dr. Douglas prior to the filing of the application for the '736 patent, and various methods for improving ion transmission.

Id. at ¶¶ 10, 11, 14, 18-29. (App. Tab 5 at A514-21.)

4. Miscellaneous allegations that do not state a prima facie defense of inequitable conduct, including allegations relating to:

claim construction arguments in the present litigation, *i.e.*, "Plaintiffs misled the Patent Examiner by arguing that one or more prior art references were distinguishable based upon the plain meaning of 'first,' 'second,' 'inlet orifice,' 'interchamber orifice' and 'relatively low level' when they had taken (and intended to take) the opposite position in interpreting the claims of the '736 Patent for infringement purposes," the failure to consult with the inventors during the reexamination of the '736 patent, and the mechanics of the procurement and execution of the French Declaration.

Id. at ¶¶ 5, 15-17. (App. Tab 5 at A513, A516.)

In its Answers, Micromass asserts a counterclaim for a declaratory judgment that the '736 patent is unenforceable for inequitable conduct. D.I. 46 at 15-16 (¶¶ 19-23); D.I. 47 at 15-16 (¶¶ 19-23). Further, in Counts II, III, and IV of its counterclaim, Micromass asserts that AB/Sciex violated Section 2 of the Sherman Act by enforcing the '736 patent that "was obtained by way of fraud on the USPTO" and by filing this "sham" lawsuit. D.I 46 at 16-19 (¶¶ 24-43); D.I. 47 at 16-19 (¶¶ 24-43). Micromass relies on the acts of inequitable conduct as described above to support its inequitable conduct defense and declaratory judgment counterclaims, as well as its antitrust counterclaims.

#### **ARGUMENT**

#### APPLICABLE LEGAL STANDARDS I.

#### Summary Judgment A.

Summary judgment is appropriate "if the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the party is entitled to a judgment as a matter of law." Fed. R. Civ. P. 56(c). To this end, the court must draw all reasonable factual inferences in favor of the non-moving party. Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 255 (1986); Akron Polymer Container Corp. v. Exxel Container, Inc., 148 F.3d 1380, 1384 (Fed. Cir. 1998). Although the moving party has the initial burden of demonstrating that no genuine issue of material fact exists, once this burden is met, the non-moving party must present evidence showing that there is a genuine issue of material fact in order to avoid summary judgment. Celotex Corp. v. Catrett, 477 U.S. 317, 322-23

16

(1986). The non-moving party may not simply rest on the pleadings, but must go beyond the pleadings to present evidence of a factual dispute that creates a genuine issue for trial. Celotex, 477 U.S. at 324. The Federal Circuit has upheld the grant of summary judgment of no inequitable conduct. See, e.g., ATD Corp. v. Lydall, Inc., 159 F.3d 534, 547 (Fed. Cir. 1998) (affirming summary judgment of no inequitable conduct).

#### Inequitable Conduct B.

Proof of inequitable conduct entails a two-step inquiry. Halliburton Co. v. Schlumberger Tech. Corp., 925 F.2d 1435, 1439 (Fed. Cir. 1991). A party alleging inequitable conduct must prove both materiality and intent to deceive by clear and convincing evidence. Id. Specifically, the party alleging inequitable conduct must offer clear and convincing proof that: (1) the prior art or information is material; (2) the patent applicant knew of the prior art or information and of its materiality; and (3) the applicant intentionally failed to disclose or misrepresented the prior art or information to the PTO in order to mislead the PTO. FMC, 835 F.2d at 1415.

#### Materiality 1.

Prior to 1992, information was considered material if there was a "substantial likelihood that a reasonable examiner would have considered the information important in deciding whether to allow the application to issue as a patent." Molins PLC v. Textron, Inc., 48 F.3d 1172, 1179 (Fed. Cir. 1995). A reference that is "merely cumulative" of other references that are before the examiner is not material. Id. In 1992, the PTO amended the regulation governing materiality to clarify an applicant's duty to disclose material information. As amended, the regulation states that information is material to

#### patentability when:

- It establishes, by itself or in combination with other information, a (1) prima facie case of unpatentability of a claim; or
- it refutes, or is inconsistent with, a position the applicant takes in: (2)
  - opposing an argument of unpatentability relied on by the [PTO], or
  - asserting an argument of unpatentability. (ii)

37 C.F.R. § 1,56(b) (2001).10

#### 2. Intent

The materiality of an omission or misrepresentation does not lead automatically to an inference of intent to deceive, because intent "is a separate and essential component of inequitable conduct." Molins, 48 F.3d at 1178 (quoting Allen Organ Co. v. Kimball Int'l, Inc., 839 F.2d 1556, 1567 (Fed. Cir. 1988)); see, e.g., Allen Organ, 839 F.2d at 1567 (affirming judgment that inequitable conduct was not proved, even though a withheld reference was found to anticipate a claim, because "absent intent to withhold it is not controlling whether the reference is found to anticipate or otherwise be material"); Braun, Inc. v. Dynamics Corporation of America, 975 F.2d 815, 822 (Fed. Cir. 1992) ("materiality does not presume intent"); Akzo v. E.I. Du Pont de Nemours, 810 F.2d 1148, 1153 (Fed. Cir. 1987) (affirming finding that inequitable conduct was not proved where there was a "material representation" because the threshold level of intent was not met). Further, there can be no inference of intent to deceive where an applicant fails to appreciate the materiality of a reference. Monsanto, 61 F. Supp. 2d at 198.

"[G]iven the ease with which a relatively routine act of patent prosecution can be

The appropriate standard is the version of the regulation that applied at the time of the prosecution. See In re Harita, 847 F.2d 801, 807 (Fed. Cir. 1988).

portrayed as intended to mislead or deceive, clear and convincing evidence of conduct sufficient to support an inference of culpable intent is required." *Molins*, 48 F.3d at 1181 (quoting *Northern Telecom, Inc. v. Datapoint Corp.*, 908 F.2d 931, 939 (Fed. Cir. 1990)). In deciding whether to grant summary judgment, the Court:

must decide whether the evidence respecting culpable intent makes the fact reasonably inferable either way, or whether the evidence is so one-sided that the factual issue of intent may be decided as a matter of law. And, in looking to the record for evidence of a genuine issue respecting intent to deceive the PTO, all of the circumstances, including those indicative of good faith, must be considered. However, merely conclusory statements [made by a party asserting inequitable conduct] or completely insupportable, specious, or conflicting explanations or excuses will not suffice to raise a genuine issue of fact.

Paragon Podiatry Lab., Inc. v. KLM Lab., 984 F.2d 1182, 1190 (Fed. Cir. 1993) (citations omitted) (emphasis added).

#### C. Antitrust Counterclaims

To establish an antitrust violation based on a claim of fraudulent procurement, an antitrust plaintiff must prove by clear and convincing evidence that: (1) an individual associated with the prosecution knowingly and willfully made a false representation or deliberate omission of a fact material to patentability; (2) with clear intent to deceive the patent examiner; (3) on which the examiner justifiably relied in granting the patent, and (4) but for the fraud, the patent would not have issued. *Nobelpharma AB v. Implant Innovations, Inc.*, 141 F.3d 1059, 1070-71 (Fed. Cir. 1998). A mere showing of inequitable conduct that is otherwise sufficient to render a patent unenforceable does not necessarily rise to the level of the knowing and willful fraud required to establish a

19

violation of the Sherman Act. Argus Chem. Corp. v. Fibre Glass-Evercoat Co., 812 F.2d 1381, 1384-85 (Fed. Cir. 1987).

II. THERE IS NO EVIDENCE THAT ANY ASSOCIATED INDIVIDUAL WITHHELD ANY MATERIAL INFORMATION WITH INTENT TO DECEIVE THE PTO IN THE ORIGINAL PROSECUTION OF THE '736 PATENT

The uncontroverted sworn testimony of both Dr. French and Dr. Douglas establishes that they approached the prosecution of their '736 patent in good faith and had no intent to deceive the PTO:

> O: Did you provide to counsel, in connection with the '763 [sic] patent, references that you considered to be material with regard to the grant of the application that matured into the '763 [sic] patent?

A: Yes.

French Tr. of 6/28/01, at 276. (App. Tab 7 at A533.)

O: Okay. Did you provide to the U.S. Patent Office all references that you believed were relevant to your discovery and the 736 patent?

A: Yes.

Douglas Tr. of 8/24/01, at 526. (App. Tab 10 at A596.)

The Inventors Did Not Cite Collision Cell References Such As The A. French Application And The Caldecourt Article Because They Did Not Consider Them Pertinent To Their Invention, And They Are Not Pertinent

Micromass accuses the inventors of the '736 patent of withholding two references from the PTO during the original prosecution with an intent to deceive. These two

<sup>11</sup> Micromass also alleges that AB/Sciex "misled the USPTO by failing to disclose prior art disclosing that collisions between ions and gas molecules at high pressures decrease the kinetic energies of said ions (see, e.g., Douglas Dep. at 39-41 & 116-17, Caldecourt at 238), which prior art was substantially more pertinent than the few

references are the Caldecourt article and the French application. Both references describe a mass spectrometer having a collision cell. The French application was filed about eight years before the priority date of the '736 patent.

The '736 patent is directed to an improved ion guide. The improvement is obtained by operating the ion guide at high pressures and maintaining kinetic energies of entering ions relatively low to avoid fragmentation. The inventors testified that they disclosed all references that they believed were relevant, *i.e.*, those that relate to ion guides in mass spectrometers. *See* Douglas Tr. of 8/24/01, at 526 (App. Tab 10 at A596); French Tr. of 6/28/01, at 276 (App. Tab 7 at A533). In contrast, the Associated Individuals did not disclose references they believed were not related to the claimed invention. The undisclosed references that the Associated Individuals did not believe, and still do not believe, are relevant concern collision cells and ion traps. For example, in discussing why he did not disclose the Caldecourt article in the original prosecution, Dr. Douglas stated:

Q: Okay. Given that Caldecourt discloses a pressure time path length in excess of the significant parameter of the patent, why didn't you disclose it to the United Stated Patent Office when you applied for the '736 patent?

references cited in the '736 Patent Application." Defs.' Supp. Resp. to Interrog. No. 11 ¶ 24. (App. Tab 5 at A519-20.)

With regard to references other than the Caldecourt article, AB/Sciex cannot respond to such an allegation as Micromass does not specify what art it relies upon for its claim of inequitable conduct. See id. During the reexamination, however, the Associated Individuals not only disclosed such references, but pointed out to the Examiner that, for example, "Shaaf finds that the introduction of the ... gas reduces the average ion energy ..." Req. for Reexamination at 6. (App. Tab 4 at A185.) This disclosure establishes candor, not an intent to deceive.

A: I will try and answer it. It's because this is a collision cell for fragmenting ions; whereas, our patent is an ion guide for transporting ions with minimum fragmentation. So, the purpose of the two devices is completely different.

Douglas Tr. of 8/24/01, at 346. (App. Tab 10 at A574.) AB/Sciex cited the Caldecourt aticle in the Request for Reexamination because Micromass had asserted it was pertinent, not because the inventors believed it was. In fact, during the reexamination, the Examiner agreed that the Caldecourt article was not material, since he did not reject any claim based on it.

Likewise, the Associated Individuals did not consider prior art relating to ion traps to be relevant to the claimed invention. For example, Dr. Douglas testified:

> O: Speaking of [the Douglas and French article], didn't you report in your paper that there was a similarity between what you observed and what was observed in ion traps?

A: Yes, we did.

Q: Okay, where is that in the '736 patent?

A: That paper was published four years later. In four years we had learned a lot about traps - at least, I had - about traps and ion guides. So, at the time of the '736 patent, there was no similarity that I was aware of.

Douglas Tr. of 8/24/01, at 406-407 (emphasis added). (App. Tab 10 at A592-93.) Out of an abundance of caution, the Associated Individuals disclosed references concerning ion traps to the PTO during the reexamination to comport with their newly acquired knowledge.

The mere fact that references were not disclosed is insufficient to uphold a finding of inequitable conduct. As this Court has explained, where an applicant does not appreciate the materiality of a reference, there can be no intent to deceive. *Monsanto*, 61 F. Supp. 2d at 198 ("Because he did not appreciate the facts disclosed in the [reference] as material information, [applicant's] failure to disclose the information did not result from any intent to mislead the PTO"); see also FMC, 835 F.2d at 1415.

With regard to the French application, in the reexamination, the PTO did initially base a rejection of the claims on it, in combination with the two Finnigan references. However, the rejection stemmed from a misunderstanding of a passage in the French application. The Examiner incorrectly connected the French application's disclosure of a the use of high pressure in a collision cell within a tandem mass analyzer section to a separate and unrelated reference to an ion guide for guiding ions into a mass analyzer. Although the Examiner acknowledged that the passage on which he relied made a reference to a "co-pending application" exemplifying the ion guide, he was obviously unaware that the text of that co-pending application had been previously before him in the original prosecution in the form of Dr. French's '420 patent. The disclosure of the '420 patent was in fact discussed in the specification of the '736 patent. After Dr. French explained that the co-pending application had the same disclosure as that '420 patent and that the pressures in the collision cell did not apply to the ion guide, the Examiner confirmed the patentabilty of the original claims over the French application.

The Federal Circuit has affirmed a finding of no inequitable conduct based on facts less compelling than those present here. See Glaverbel Societe Anonyme v Northlake

23

Mktg. & Supply, Inc., 45 F.3d 1550, 1557-58 (Fed. Cir. 1995). In Glaverbel, the applicant knew about a Swedish patent but did not disclose it to the PTO during the original prosecution of its patent. In a reexamination of the patent at issue, the Examiner initially rejected the claims based on the Swedish patent, but later withdrew the rejection after the claims were amended. The defendant asserted inequitable conduct based on, inter alia, the applicant's failure to cite the Swedish patent during the original prosecution. In finding that the defendant had not proven materiality or intent to deceive by clear and convincing evidence, the Federal Circuit stated that "[n]o adverse inference flows from a patentee's actions in adjusting its claims on reexamination, whether or not the patentee itself initiated the reexamination." Id. at 1558. In the present case, not only did the patentee initiate the reexamination, but the original claims were allowed without amendment over the French application.

As in Glaverbel, there is no evidence here that either inventor perceived the references to be material or had any intent to deceive the PTO. "In a case involving nondisclosure of information, clear and convincing evidence must show that the applicant made a deliberate decision to withhold a known material reference." Molins, 48 F.3d at 1181. Rather, the fact that the applicants sought reexamination of the '736 patent over the French application and other references, which Micromass had contended were pertinent, supports an inference of good faith. See, e.g., LNP Eng g Plastics, Inc v Miller Waste Mills, Inc., 2000 U.S. Dist. LEXIS 20888, at \*36-40 (D. Del. Aug. 8, 2000).

24

B. The Inventors Did Not Cite Ion Trap References Because They Did Not Consider Them Pertinent to Their Invention, And They Are Not Pertinent

Micromass alleges that AB/Sciex committed inequitable conduct when it failed to disclose "certain ion trap references" to the PTO. Defs.' Supp. Resp. to Interrog. No. 11 ¶ 8. (App. Tab 5 at A514.) However, there is no evidence that any Associated Individual believed that references relating to ion traps were relevant to the claimed invention. The inventors believed then, and still believe, that ion traps are very different from the claimed invention. For instance, Dr. Douglas testified that an ion trap is "a very different device" because, *inter alia*, "there's no ion storage in the 736 patent." Douglas Tr. of 8/24/01, at 397-98. (App. Tab 10 at A588-89.) The most that can be said is that years after the original prosecution, the inventors saw an analogy in the effect that they had discovered and the effect present in ion traps. The Ion Trap references were then disclosed to the PTO during the reexamination. The Examiner, however, did not rely on any of the Ion Trap references, confirming that they are not material. The inventors can hardly be faulted for not disclosing them during the original prosecution even assuming they were aware of

of the elements recited in claim 1 of the '736 patent, such as: (a) the first and second vacuum chambers; (b) the first and second rod sets; (c) the inlet orifice; (d) the interchamber orifice; (e) the application of AC-only voltage to a first rod set; (f) the application of AC and DC voltages to a second rod set; (g) the product of pressure and rod length; and (h) maintaining the kinetic energies of ions at a relatively low level as they travel from an inlet orifice to a first rod set. See, e.g., Req. for Reexamination at 6-7, 9-12. (App. Tab 4 at A185-86.)

<sup>&</sup>lt;sup>13</sup> In the Douglas and French article, the inventors state that collisional focusing "appears to be analogous to effects seen in three-dimensional ion traps." *Id.* at 406. (App. Tab 12 at A612).

them. Micromass points to no evidence of intent to deceive here, and there is none.

The Inventors Did Disclose The Pertinent Ion Guide References Of C. Which They Were Aware, Including The Ion Guide Section Of the **TAGA 6000** 

Like the Smith references discussed in the specification of the '736 patent, the TAGA 6000 was a quadrupole mass spectrometer that included, at least for some time, an ion guide. That ion guide was operated at very low pressures, just like that in the Smith references. See Douglas Tr. of 8/24/01, at 360 (stating that the pressure of the ion guide in a TAGA mass spectrometer "would be very low . . . 1 or 2 x 10 to the minus 4 torr"). (App. Tab 10 at A578.) Additionally, the TAGA 6000 system included a collision cell like the one disclosed in the cited '420 patent. Id. at 363. (App. Tab 10 at A581.) In fact, Dr. Douglas testified that the system disclosed in the '420 patent is the pertinent part of the TAGA 6000:

> Q: Why didn't you disclose the TAGA 6000 system to the Patent Office in connection with your application for the '736 patent?

A: We disclosed the parts we thought were relevant, which was the ion guide at the front of the machine

Q: Okay. Where is that disclosed?

A: Reference is cited. French, U.S. Patent 4,328,420. In there it describes an ion guide which is very similar, or essentially the TAGA ion guide.

Q: Okay. Was there any other reason you didn't disclose the TAGA?

A: I didn't think it was relevant.

Q: Why did you not think it was relevant?

A: Because this is a collision cell for fragmenting ions - for fragmenting ions, and the '736 patent is about ion guides, where we attempt to minimize fragmentation.

Douglas Tr. of 8/24/01, at 359-360, 363. (App. Tab 10 at A577-78, A581.)

Micromass further alleges that AB/Sciex engaged in inequitable conduct by failing to disclose the '099 patent during the original prosecution of the '736 patent. Defs.' Supp. Resp. to Interrog. No. 11 ¶ 13. (App. Tab 5 at A515-16.) The '099 patent, on which Dr. French is an inventor, describes a mass spectrometer that uses electrodes having a DC voltage applied to them to electrostatically direct ions. Enke Decl. ¶ 10. (App. Tab 17 at A667.) The '099 patent does not disclose an ion guide operating at a high pressure to focus ions with collisions, and therefore is not material to the claimed invention. Id. Moreover, there is no evidence that Dr. French ever considered the '099 patent pertinent to the invention of the '736 patent.

Micromass argues that the '099 patent discloses the use of "gas 'sufficiently dense that collisions between ions and gas molecules are frequent, thus limiting the kinetic energy which ions can acquire" and thus it was inequitable conduct not to disclose it. See Defs.' Supp. Resp. to Interrog. No. 11 ¶ 13. (App. Tab 5 at A515-16.) However, Micromass omits the fact that the concept that ion energy can be reduced through collisions was provided to the Examiner during the reexamination of the '736 patent. See, e.g., Req. for Reexamination at 6 ("the introduction of the ... gas reduces the average ion

energy and . . . collisions between the ions and the gas tend to cool the ions") (internal quotations omitted). (App. Tab 4 at A185.) This concept is at the heart of the operation of the Ion Trap references disclosed to the Examiner during the reexamination. Indeed, the Associated Individuals informed the Examiner that "the use of a buffer gas to cool ions in an ion trap was common knowledge in the art . . . [r]educing the kinetic energy of trapped ions within an ion trap is desired . . . ." See id. at 7. (App. Tab 4 at A186.)

Despite these disclosures, the Examiner did not base a rejection or objection on the information disclosed in the Ion Trap references. This undisputed fact belies the notion that such "well known" information was material during the original prosecution.

D. Dr. Douglas Did Not Disclose All Experiments And All Ways Known to Him to Improve Ion Transmission Because They Were Not Part of The Invention

Micromass alleges that AB/Sciex committed inequitable conduct when it failed to disclose experiments performed by Dr. Douglas prior to the filing of the application for the '736 patent, and that these experiments, which did not show an improved transmission of ions, allegedly contradict representations made during the reexamination. Defs.' Supp. Resp. to Interrog. No. 11 ¶¶ 20, 21. (App. Tab 5 at A518.) During his deposition, Dr. Douglas explained that such experiments were not disclosed because they were too preliminary and not "reproducible" to be indicative of anything other than his learning curve:

- A: Because at this point This was very early on in the experiments, and I was having trouble making things reproducible.
- Q: So, you made a considered decision not to disclose this data to the Patent Office?

A: At this point we - Okay. Now, I have to look back to see if I had seen increases in intensity before. But when we were starting to do these experiments, it wasn't clear what was going on. Sometimes you would see increases. Sometimes, like here, we wouldn't see increases. . . So, we had not yet learned how to optimize this machine.

A: .... When we started doing experiments – this is always the case – you adjust parameters. . . . You have to learn what's important, how to make things reproducible. After we made things reproducible, and we knew how to see the increases consistently, then we would consider whether we would go to the Patent Office.

Douglas Tr. of 8/23/01, at 138-39. (App. Tab 9 at A562-63.) Moreover, there is no evidence that indicates that any other Associated Individual considered these preliminary experimental results relevant to the claimed invention. These experimental results do not support an inference of an intent to deceive the PTO.

Micromass also alleges that AB/Sciex committed inequitable conduct when it failed to disclose various techniques for optimizing the mass spectrometer disclosed in the '736 patent, including: increasing the pump size, adjusting spacing between skimmer and orifice, placing the skimmer tip in the free jet, and setting the voltage offset between the "first rod set" and the "second rod set" and that between the "first rod set" and the "interchamber orifice." Defs. Supp. Resp. to Interrog. No. 11 ¶ 25-29. (App. Tab 5 at A520-21.) While the specification of the '736 patent provides guidance on these parameters, they are not claimed. The invention of the '736 patent improves sensitivity by collisional focusing, which involves operating an ion guide at higher pressure and maintaining the kinetic energy of the entering ions relatively low. See '736 patent at col.

5, 1l. 40-49, col. 12, 1l. 30-49. (App. Tab 1 at A18, A21.) The various parameters listed by Micromass are not material to patentability because they do not relate to the claimed invention.

However, even assuming that the such parameters constitute material information, Micromass must establish, by clear and convincing evidence, that AB/Sciex intended to deceive the PTO by withholding such information. Micromass has not presented a shred of evidence related to intent and thus has not, and cannot, meet its burden of proof. In fact, the following deposition testimony of the inventor, Dr. Douglas, demonstrates that there was no such intent to deceive the PTO:

Q: .... you knew, as of the time you filed this patent application, that quadrupling the size of the sampling orifice and putting a bigger pump on would lead to a 7 times increase in .... the number of ions one could get through. Right?

A: Yeah, I suppose I was aware of that.

Q: .... If you were aware of it, why didn't you tell the Patent Office about it?

A: It has nothing to do with the patent.

Q: Why is that?

A: The patent describes a way of getting improved transmission through an ion guide by running at higher pressure.

Q: And another way of getting improved transmission is to put a bigger pump, and use a bigger orifice. Right?

A: No. You still have the same fraction of ions transmitted. It just is more coming in.

Douglas Tr. of 8/23/01, at 250-51. (App. Tab 9 at A568-69.) See, e.g., Monsanto, 61 F. Supp. 2d at 198 (finding no intent to mislead the PTO where the applicant did not appreciate the materiality of a reference).

Thus, there is no evidence, much less clear and convincing evidence, to support Micromass's allegation that the inventors intended to deceive the PTO in not disclosing various methods for optimizing ion transmission.

- THERE IS NO EVIDENCE THAT ANY ASSOCIATED INDIVIDUAL Ш. INTENDED TO DECEIVE THE PTO IN ARGUING ABOUT THE CITED PRIOR ART IN THE ORIGINAL PROSECUTION OR THE REEXAMINATION OF THE '736 PATENT
  - The Examiner Had the Cited Prior Art Before Him and Could Make A. His Own Judgments about What the Prior Art Taught

Micromass alleges that various misrepresentations were made about the teachings of the Second Smith reference in the specification of the '736 patent, and that misrepresentations were made about the teachings of the French application, the Finnigan abstract, the Finnigan paper, the Ion trap references, and the various Unnamed Collision Cell references during the reexamination of the '736 patent. Defs.' Supp. Resp. to Interrog No 11 ¶¶ 2-4, 6-9, 11. (App. Tab 5 at A512- 15.) With respect to the reexamination, Micromass targets statements made by Mr. Sutcliffe in submissions to the PTO, as well as statements made by Dr. French in the Declaration he submitted. But all of the references were squarely before the PTO, and the Examiner was in a position to judge the soundness of the arguments made concerning them.

Akzo N.V. v. U.S. Int'l Trade Comm'n disposes of these allegations as a basis for a charge of inequitable conduct. 808 F.2d 1471 (Fed. Cir. 1986). There, the Federal Circuit found no inequitable conduct when a patent applicant argued and submitted affidavits to distinguish disclosed prior art from its claimed invention. The Court found that the applicant's advocacy of a particular, albeit favorable, interpretation of disclosed prior art satisfied neither the materiality nor the intent prong of the inequitable conduct standard because "the examiner was free to reach his own conclusion regarding [the claimed invention] based on the art in front of him." Id. at 1482. Furthermore, there is not a shred of evidence to support an inference of deceptive intent. Thus, the arguments made to distinguish the cited prior art from the claimed invention cannot constitute inequitable conduct.

Moreover, with regard to Dr. French's Declaration in the reexamination, there is no evidence that he believed his statements were inaccurate, and they were accurate. Micromass first contends that Dr. French misled the Examiner by stating that the "pressure range" recited in the French application with respect to the collision cell is "a pressure range of 10<sup>-2</sup> torr to 10<sup>-4</sup> torr, which means that the center of the quadrupole section 6 would be at or below 10<sup>-4</sup> torr." Defs.' Supp. Resp. to Interrog. No. 11 ¶ 3. (App. Tab 5 at A512.) There is no evidence that this statement is anything but true and accurate. Indeed, Dr. French's related '420 patent establishes the accuracy of Dr. French's Declaration. It proves that the "pressure range" is not a selectable pressure within the given range, but a gradient. The '420 patent discloses a collision cell, like that of the French application. See '420 patent at Fig. 7, 8. (App. Tab 3 at A131.) Like the French

32

application, high pressure gas is introduced in the center of the collision cell of the '420 patent. *Id.* at col. 6, ll. 51-63. (App. Tab 3 at A170.) Dr. French's '420 patent describes the pressure distribution of the collision cell as varying through the cell:

The density distribution is the target region 68' then has generally a cosine squared distribution, being a maximum at point 126 and falling off toward the ends 128. For example, if the pressure in chamber 120 is 0.1 torr, and if aperture 122 is 0.004 inches in diameter, this typically creates a gas density equivalent to 2.5 x 10<sup>-3</sup> torr at point 126, falling to 1.38 x 10<sup>-4</sup> torr at point 128.

Id. at col. 6, ll. 63 - col. 7, ll. 1 (emphasis added). (App. Tab 3 at A170-71). Furthermore, whether or not Dr. French's statement regarding the pressure distribution is accurate, his related '420 patent establishes that he believed it to be true. There is no support for finding intent to deceive under these facts.

Second, Micromass asserts that AB/Sciex misled the Examiner by stating that "[t]he pressure and rod length in the AC-only quadrupole described in the French application was not intended to be used when that quadrupole was used only as an ion guide and not to fragment the ions." Defs.' Supp. Resp. to Interrog. No. 11

¶ 4. (App. Tab 5 at A512-13.) On March 11, 1998, applicants' patent attorney, Mr. Sutcliffe, and Dr. Douglas had an interview with the Examiner, Mr. Jack Berman, to discuss, inter alia, the French application. Interview Summary at 1. (App. Tab 4 at A512-13.) The Examiner's Interview Summary states that the French application "can be removed as a reference by establishing that the product of pressure and length [of the collision cell rods] was not intended to be used when [it] was used as an ion guide and not to fragment ions." Id. (App. Tab 4 at A512-13.) In reply, Dr. French's declaration

33

states, inter alia, that "[t]he pressure and rod length of the [quadrupole described in] the French application was not intended to be used when that quadrupole was used only as an ion guide and not to fragment ions." French Decl. ¶ 9. (App. Tab 4 at A290.) This is a true statement – when fragmentation is not desired, i.e., when only the parent ion is of interest, then the gas pressure in the collision cell is turned off. Indeed, the sworn testimony of Mr. James Hurst, speaking on behalf of a non-party, Thermo-Finnigan Corp., stated just that:

> Q: And in fact, when you're looking for the parent ion, the introduction of a collision gas in the collision cell is likely to cause scattering, and one would normally turn it off without reasoning, would it not?

A: The collision gas is likely to cause some fragmentation, and you would turn it off for that reason if you wanted to maximize the intensity of the

Hurst Tr. of 9/6/01, at 89-90. (App. Tab 11 at A601-02.) Thus, Dr. French's statement is not misleading; in fact, it is entirely accurate.

Third, Micromass argues that AB/Sciex "misled the Patent Examiner into believing, and did not correct the belief, that the 'declaration of Dr. French filed on June 3, 1998 establishes that the apparatus disclosed in the French application does not operate with a product of pressure and rod length greater than or equal to 2.25 x 10<sup>-2</sup> torr cm in a chamber containing a rod set operated with only AC voltages applied," when, according to Micromass, the French application did operate within these parameters. Defs.' Supp. Resp. to Interrog. No. 11 ¶ 2 (quoting Examiner in Notice of Intent to Issue Reexamination Certificate at 2. (App. Tab 5 at A512; App. Tab 4 at A362.) However, as

34

discussed above, the French application does not disclose the use of high pressure in a quadrupole that is operating as an ion guide. Micromass takes Dr. French's statement out of context and then asserts that the Examiner was misled by it. There is nothing inaccurate about Dr. French's statement.

Moreover, even if any of Dr. French's statements were inaccurate, which they are not, there is no evidence that Dr. French believed them to be inaccurate. Indeed, despite two days of examination of Dr. French at his deposition, Micromass never even broached the subject of Dr. French's Declaration. And, as stated at the outset, the French application was before the Examiner, who was free to reach his own conclusions regarding its disclosure. See Akzo, 808 F.2d at 1482.

#### THERE IS NO EVIDENCE THAT ANY ASSOCIATED INDIVIDUAL IV. WITHHELD ANY MATERIAL INFORMATION WITH INTENT TO DECEIVE THE PTO IN THE REEXAMINATION OF THE '736 PATENT

This Court has previously found that the act of initiating a reexamination to confirm the validity of its patent prior to asserting it in a litigation supports an inference of good faith. See LNP, 2000 U.S. Dist. LEXIS 20888, at \*31-40 (finding no intent to deceive the PTO because "[k]nowingly withholding a material reference [during the reexamination] would have been inconsistent with [patentee's] goal of evaluating the validity of its own patents prior to litigation"). The Associated Individuals here, like the patentee in LNP, had no motive to withhold any material information during the reexamination of the '736 patent, and in fact, did not withhold any material information